

WHAT IS CLAIMED IS:

- 1 1. A composition comprising:
 - 2 (a) an antigen;
 - 3 (b) an adjuvant;
 - 4 (c) at least one carrier comprising a member
5 selected from the groups consisting of:
 - 6 (i) an acylated amino acid or a salt
7 thereof;
 - 8 (ii) a poly amino acid comprising at least
9 one acylated amino acid or a salt thereof;
 - 10 (iii) a sulfonated amino acid or a salt
11 thereof;
 - 12 (iv) a poly amino acid comprising at least
13 one sulfonated amino acid or a salt thereof; or
14 (v) any combination thereof.
- 1 2. A composition as defined in claim 1, comprising
2 a mixture.
- 1 3. A composition as defined in claim 1, comprising
2 a microsphere.
- 1 4. A composition as defined in claim 1, wherein
2 said antigen comprises a peptide.
- 1 5. A composition as defined in claim 1, wherein
2 said adjuvant comprises a mucosal adjuvant.

1 6. A composition as defined in claim 1, wherein
2 said carrier comprises an acylated amino acid or a salt thereof.

1 7. A composition as defined in claim 1, wherein
2 said carrier comprises a poly amino acid comprising at least one
3 acylated amino acid or a salt thereof.

1 8. A composition as defined in claim 1, wherein
2 said carrier comprises a sulfonated amino acid or a salt
3 thereof.

1 9. A composition as defined in claim 1, wherein
2 said carrier comprises a poly amino acid comprising at least one
3 sulfonated amino acid or a salt thereof.

1 10. A composition as defined in claim 1, wherein
2 said carrier is selected from the group consisting of,
3 N-cyclohexanoyl arginine; a mixture of N-cyclohexanoyltyrosine
4 and N-cyclohexanoylleucine; a mixture of N-phenylsulfonylvaline,
5 N-phenylsulfonylleucine, N-phenylsulfonylphenylalanine,
6 N-phenylsulfonyllysine, and N-phenylsulfonylarginine; and a
7 mixture of N-benzoylvaline, N-benzoylleucine, N-benzoylphenyl-
8 alanine, N-benzoyllysine, and N-benzoylarginine.

1 11. A composition comprising:
2 (a) ovalbumin;
3 (b) cholera toxin; and

- 4 (c) at least one carrier comprising a member
5 selected from the groups consisting of:
6 (i) an acylated amino acid or a salt
7 thereof;
8 (ii) a poly amino acid comprising at least
9 one acylated amino acid or a salt thereof;
10 (iii) a sulfonated amino acid or a salt
11 thereof;
12 (iv) a poly amino acid comprising at least
13 one sulfonated amino acid or a salt thereof; or
14 (v) any combination thereof.

- 1 12. A composition comprising:
2 (a) Infectious Bursal Disease Virus;
3 (b) cholera toxin;
4 (c) cholera toxin β -subunit; and
5 (d) at least one carrier comprising a member
6 selected from the groups consisting of:
7 (i) an acylated amino acid or a salt
8 thereof;
9 (ii) a poly amino acid comprising at least
10 one acylated amino acid or a salt thereof;
11 (iii) a sulfonated amino acid or a salt
12 thereof;
13 (iv) a poly amino acid comprising at least
14 one sulfonated amino acid or a salt thereof; or
15 (v) any combination thereof.

1 13. A composition as defined in claim 12, comprising
2 a microsphere.

1 14. A dosage unit form comprising
2 (A) a composition according to claim 1; and
3 (B) (a) an excipient,
4 (b) a diluent,
5 (c) a disintegrant,
6 (d) a lubricant,
7 (e) a plasticizer,
8 (f) a colorant,
9 (g) a dosing vehicle, or
10 (h) any combination thereof.

1 15. A dosage unit form according to claim 14
2 comprising a tablet, a capsule, or a liquid.

1 16. A method for administering an antigen to an
2 animal, said method comprising orally administering a
3 composition as defined in claim 1.

1 17. A method for immunizing chickens, said method
2 comprising orally administering a composition as defined in
3 claim 12.

1 18. A method for preparing a composition as defined
2 in claim 1, said method comprising mixing an antigen, an

3 adjuvant, and a carrier comprising a member selected from the
4 group consisting of:

1 (i) an acylated amino acid or a salt
2 thereof;

3 (ii) a poly amino acid comprising at least
4 one acylated amino acid or a salt thereof;

5 (iii) a sulfonated amino acid or a salt
6 thereof;

7 (iv) a poly amino acid comprising at least
8 one sulfonated amino acid or a salt thereof; or

9 (v) any combination thereof.

1 19. A method for preparing microspheres, said method
2 comprising:

3 (A) solubilizing, in a solvent, at least one carrier
4 to provide a carrier solution; and

5 (B) contacting said carrier solution with an
6 antigen, an adjuvant, and a precipitator solution in which said
7 carrier is insoluble;

8 wherein said carrier comprises a member selected from
9 the groups consisting of:

10 (a) an acylated amino acid or a salt
11 thereof;

12 (b) a poly amino acid comprising at least
13 one acylated amino acid or a salt thereof;

14 (c) a sulfonated amino acid or a salt
15 thereof;

- 16 (d) a poly amino acid comprising at least
17 one sulfonated amino acid or a salt thereof; or
18 (e) any combination thereof.

1 20. A method as defined in claim 19, wherein said
2 carrier solution has a pH within a first range and said
3 precipitator solution has a pH within a second range, said first
4 range being different than said second range.

1 21. A composition as defined in claim 12, wherein
2 the carrier comprises a mixture of *N*-phenylsulfonylvaline, *N*-
3 phenylsulfonylleucine, *N*-phenylsulfonylphenylalanine, *N*-phenyl-
4 sulfonyllysine, and *N*-phenylsulfonylarginine; and a stabilizer.

1 22. A composition as defined in claim 21, wherein
2 said stabilizer comprises sodium 2-cyclohexylbutyrate.